

Heather Stewart
Head of Wholesale Market Reform
Ofgem

24 June 2022

via email

Dear Heather,

Response to the call for input on Ofgem's Locational Pricing Assessment first workshop

Thank you for the opportunity to attend the first Ofgem workshop on Locational Pricing Assessment. This document is a response to the subsequent call for input. It contains the responses of National Grid Interconnectors¹ and National Grid plc to the the three topic areas as requested, namely:

1. The key opportunities associated with introducing more granular locational pricing in GB;
2. The key implementation challenges, risks and mitigations; and
3. The proposed approach to modelling zonal and nodal market designs.

Opportunities

In our view this question should be expanded to cover both the pros and cons of introducing more granular location pricing in GB.

The main benefit of more granular pricing is to provide stronger price signals to market participants on production, consumption and investment. The increased granularity, when accompanied by greater transparency and availability of data, also has the potential to generate opportunities related to assets that provide a flexible response to price signals.

Having stronger price signals can also lead to a more efficient use of the network, potentially reducing constraint costs and reducing the need for network investment.

At the same time, introducing more granular pricing also has a number of drawbacks, which were discussed to some extent at the first Ofgem workshop. In particular, there is a significant risk to investment associated with the difficulty of predicting more granular prices. This risk increases exponentially with nodal pricing, as the price of a node could vary significantly over the lifetime of an asset based on changes in generation, transmission, interconnection and demand on the node and nearby nodes.

There is also a risk that market design could become very complex, reducing liquidity in the wholesale market and acting as a barrier to new entrants. A related point is that it will make market coupling with interconnected countries more complex, which could have an adverse impact on the implementation of the UK-EU Trade and Cooperation Agreement.

It is also important to note that changes in market design could impact consumers bills through the impact on investment support schemes. It is reassuring that Ofgem is considering the impact that more granular

¹ National Grid Interconnectors represents the 50% ownership in the operational interconnectors IFA, IFA2 and NSL, alongside the 50% ownership in the Viking Link interconnector under construction and our business development interests, particularly in relation to multi-purpose interconnectors.

pricing would have across schemes such as the Contracts for Difference, the Capacity Market and the Cap and Floor regime. In our view the analysis should be both qualitative and quantitative where possible.

More generally, it is difficult to assess the pros and cons of more granular pricing without seeing detailed analysis of a zonal or nodal model, nor understanding the corresponding changes that would be made in other parts of the market. We need sufficient data from the analysis, when available, in order to fully understand the pros and cons, opportunities and risks. We therefore look forward to seeing the outputs of the FTI modelling, preferably before the second Ofgem workshop.

Finally, it is also crucial to consider what the alternatives are to the introduction of more granular pricing, such as by introducing real-time locational signals in Balancing Services Use of System charges, or by accelerating network build-up to address the increase in constraint costs.

Implementation challenges

The UK has ambitious decarbonisation targets and it is important to consider how any market reform might impact the investor confidence needed to deliver Net Zero. In this respect nodal pricing might face the highest implementation challenges due to the inherent difficulty of predicting market prices at such granular level. In our view the effect of this would not just be an increase in the cost of capital, we would expect that in some instances investment would not be undertaken unless significant consumer underwriting is provided, which would be to the detriment of consumers.

A zonal model where the zones are defined based on the most significant network constraints might face a lower implementation challenge. It is also more aligned to the approach taken on a number of European countries to organise the onshore network into bidding zones, hence might enable better cooperation in the development of the North Sea grid.

If more granular pricing is implemented, it will be important for market participants to have full transparency on how prices will be set and the timescales on which changes will be made. As part of the implementation phase of any market changes, Ofgem needs to give consideration on how to provide sufficient transparency of data to allow the market to react to the price signals.

It will also be important to consider how the more granular pricing data will be made available to market participants, embracing digitalisation at the start of the implementation phase.

Proposed modelling approach

This part of our response supplements the feedback that we provided in our written response on 8 June 2022. The proposed modelling approach of 7 zones and 750 nodes seems appropriate but we would like to have greater clarity on the zones selected and the rationale used; particularly how they relate to expected constraints in the Electricity Ten Years Statement. We note that the proposal is to use two FES 21 scenarios and would query whether it would be useful to consider as a minimum a FES 22 scenario (once published in July).

At the workshop we discussed the importance of modelling the impact of market reform on incentive support mechanism, we are of the view that the analysis should be transparent on the cost to consumers of any change to zonal or nodal pricing.

In relation to transmission capacity, we understand the rationale for restricting the study to 2040 based on available data. However we note that the Plexos team has recently presented on how in their model they can run the capacity expansion tool to also expand transmission capacity. We therefore suggest that FTI considers using this feature to model post 2040, as otherwise there is a risk that extrapolation could lead to spurious answers.

We would also like to understand what assumptions will be made on the rollout of new interconnectors for the different market designs, as this was not entirely clear from the workshop.

Regarding generation, we would expect that the economics of projected additional generation are reviewed to ensure all projected new assets make sufficient returns under the different market arrangements.

Finally, we would like to better understand what sensitivities will be applied to the analysis, for instance in relation to commodity prices and weather. Any change to the existing market design should be based on a range of outcomes and not just on a worst case scenario or central view.

Next steps

National Grid welcomes the start of Ofgem's assessment on whether introducing locational granularity into the wholesale electricity market will enable a more flexible, low carbon, low cost system. We agree on the objective of assessing the potential benefits, costs and distributional impacts associated with specific models and design choices.

We look forward to the next Ofgem workshop and we suggest reviewing the invitee list to ensure that all areas of the energy sector are sufficiently represented.

If you would like to discuss the contents of this response, please do not hesitate to contact me.

Yours sincerely,

Ruben Pastor-Vicedo
Commercial and Regulation Manager
National Grid Interconnectors